

Remarks

This amendment is in response to the office Action mailed 01/13/2005. Claims 1 and 6 have been amended, claims 2 and 7 have been canceled, and claims 1, 3-6, and 8-10 are in the case.

The specification has been amended to provide support for claims 3 – 5 and 8 – 10 by adding a new paragraph on page 4. No new subject matter is added since the subject matter was disclosed in original claims 3 – 5, and 8 – 10. Reconsideration and withdrawal of the objection to the specification based on 37 CFR 1.75 (d)(1) and MPEP Section 608.01(o) is therefore requested.

The 35 USC 112 rejection has been obviated by canceling claims 2 and 7 and adding the subject matter thereof to claims 1 and 6, respectively. Reconsideration and withdrawal of this rejection is therefore requested.

The rejection of claims 1-3, 5-8, and 10 under 35 102(a) or (e) as being anticipated by Quiel et al. US 2002/0164431) and the rejection of claims 4 and 9 under 35 USC 103(a) as being unpatentable over Quiel et al. (Quiel) are traversed.

The present invention relates to method and apparatus for coating a solvent-based liquid coating composition on a moving web wrapped around a backing roller having a relieved surface which has a pattern of circumferential grooves that provides venting of entrained air. The pattern of circumferential grooves has a geometry and depth such that any temperature gradient in the web caused by the circumferential grooves in the backing roller does not disturb the coating applied to the web. The inventor discovered that organic solvent coatings which use thinner coating laydowns than aqueous coatings, were susceptible to groove lines due to thermal gradients created by the grooves in prior art backing rollers, such as disclosed in US Patent 3,405,855. The solution to this problem as defined by the claimed invention was to use a groove frequency that was high enough to essentially eliminate the thermal gradients resulting in the achievement of good coatings. There is no discussion of electrostatics in the present patent application and no electrostatic field is part of the claimed invention.

Quiel discloses a system for coating aqueous gelatin emulsions (See Examples 1 and 2) using a grooved backing roller and electrostatic assist. The problem solved in Quiel relates to groove lines formed in the lower liquid layers when electrostatic assist is used when coating onto a web supported by a grooved backing roller. (See; Quiel, page 1, par. 0007). The solution disclosed is to increase the frequency of the circumferential grooves in the backing roller. There is no disclosure in Quiel of any problems arising due to temperature gradients. Since there are no such problems discussed, it cannot be said that the

use of higher frequency circumferential grooves in the backing roller of Quiel solves any more problems than that caused by the use of electrostatic assist. Electrostatic and thermal effects are different things and the problems arising when coating aqueous coatings are obviously different than the problems arising when coating solvent-based coatings. They are two separate issues and a solution of a problem in one coating system does not guarantee that the same problem can be solved in the same way in another coating system, never mind used to solve a different problem in the latter system. Clearly, the claimed invention is novel and nonobvious over Quiel. It took an act of invention by the present inventor to apply a solution to a completely different problem in a different system to his problem at hand and come up with a solution. There is absolutely no teaching in Quiel pointing the way to a solution to the problem of temperature gradients in solvent-based coatings using a grooved backing roller.

It is submitted that the claims in the application are allowable over the references of record and speedy allowance of this application is therefore solicited.

Respectfully submitted,



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